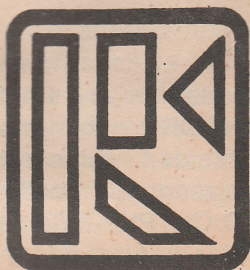


# **TAPE RECORDER SWITCH BOX**

**TMS-1**

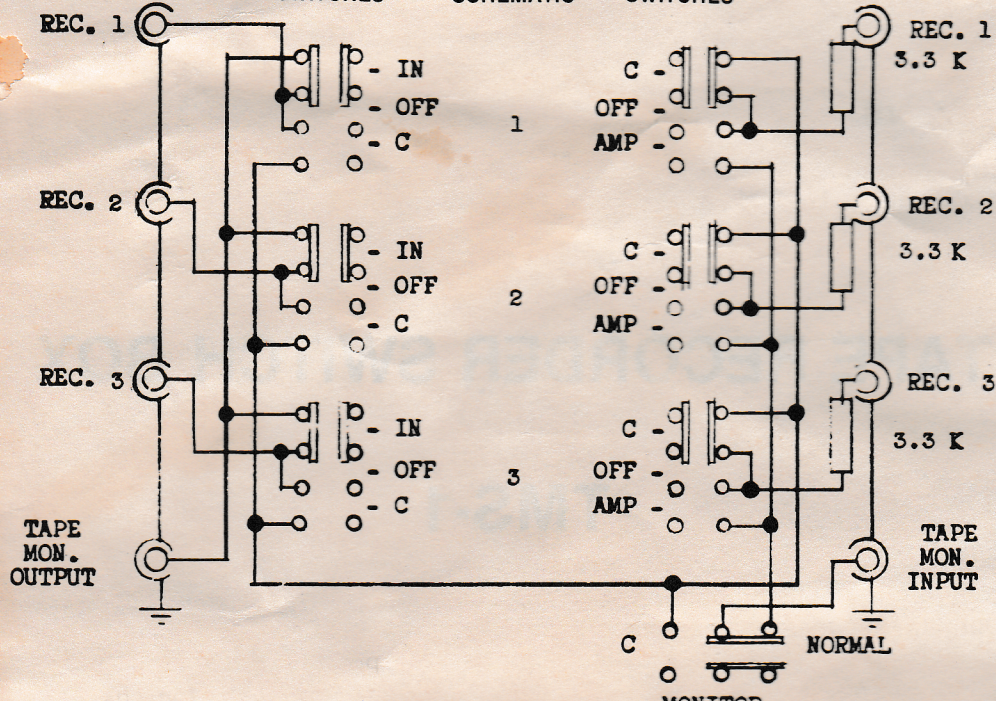


**RUSSOUND/FMP, INC.**

**P.O. BOX 204**

**STRATHAM, NEW HAMPSHIRE 03885**





## to the audio system in the car.

tape recorder. The four jacks at the end marked TAPE MONITOR are connected to your amplifier or preamplifier tape monitor system. Shielded cables from your amplifier that are normally connected to the tape recorder "line" or high level input are plugged into the jacks marked "TO OUTPUT." Cables normally connected between your amplifier tape recorder monitor and the tape recorder output are plugged into the jacks marked "TO INPUT."



Connect the high level, or line inputs of your tape recorders to the jacks marked "INPUTS", observing channel identification, L to left or A channel, R to right or B channel. Note that the input switches numbered 1, 2, and 3 are connected to the associated jacks under the same number.

Outputs from the recorders are connected to the TMS-1 jacks marked "OUTPUTS", observing channel identification. Make sure that the inputs and outputs of each tape recorder are connected to the associated jacks under the same number.

## OPERATION

The upper row of switches, under INPUT on the front panel, control the inputs of the recorders connected to the corresponding numbered jacks in the rear. The lower row of switches provide selection of the recorder outputs. Horizontal lines between each of the switch positions are useful to keep track of how the recorders are connected when more than one machine is in operation simultaneously.

It is good practice to leave all switches in the "OFF" position when not using your tape recorders, switching in the desired machines at the time of use. This will eliminate the necessity of having to check if abnormal operation occurs.

## PLAY AND MIX OUTPUTS

To play any recorder, switch in the monitor system of your amplifier, and operate the desired OUTPUT switch in the lower row to the AMP (down) position. The TMS-1 monitor switch must be in the "Norm" (normal) position. Outputs from more than one recorder can be played simultaneously, if desired, by placing the associated switches in the AMP position at the same time. 3.3 K ohm resistors are used in the output circuit for each tape recorder for this purpose, allowing mixing without overloading the recorder outputs. A loss of output, about 6 db, will be encountered when operating more than one machine because of the mixing network insertion loss.

## RECORDING

Normal recording from all the sources associated with the tape monitor system, such as phono, FM, and AM, is achieved by operating the appropriate INPUT switch in the upper row to the IN (up) position. One, two or all three machines may be operated at the same time, keeping in mind the fact that the combined loading may reduce the output from the amplifier somewhat, depending on the input impedance of the recorders, and the output impedance of the source.



## DUBBING, EDITING, ETC.

Making copies of tapes from one machine to one or two others, mixing two machines to a third, and simple editing by selective copying are accomplished using the internal Common buss system, marked "C" on the front panel. **Input and output switches placed in the "C" position will connect those inputs and outputs together.** The switches are physically lined up in this position so that the operating setup can be read at a glance. Therefore, the output of any machine connected to the "C" common buss can be recorded on any machine with its input also switched to the "C" position. Because of the previously described mixing networks, any combination of recorders is possible, one to one, one to two, two to one, etc. DO NOT place the INPUT and OUTPUT switches of any one recorder in the "C" position at the same time, for the machine may oscillate, adversely affecting the recording in progress. The INPUT switch for the **source** recorder should usually be in the "OFF" position to avoid this situation, or inadvertant recording of unwanted material from the monitor output of your amplifier. If possible, turn the record level controls down on the source machine to avoid noise pickup.

## MONITORING

The monitor switch is marked "C" and "NORM". The "C" designates Common, and connects the monitor amplifier to the internal "C" buss as marked on the 3-position output selector switches. This permits the recorder that is being operated as the source to be monitored at the same time it is feeding other machines for recording.

"NORM" is the normal mode of operation, connecting the amplifier to the output or "AMP" line from the recorders. The monitor switch must be in the "NORM" position in order to play recorders switched to the "AMP" output.

Monitoring for cueing purposes is convenient since it is possible to monitor the "C" buss directly. It is not advisable to operate the monitor switch between the "C" and "NORM" positions during recording, however, without first making test recordings and operating the switch rapidly back and forth to determine whether any recording level changes or switching clicks occur. In some circumstances it is possible that a substantial loading difference may be switched in, causing a change in level from the source recorder. This effect would be caused by a low impedance input to the amplifier monitor system. Level changes caused by this situation can be eliminated using Russound/FMP Inc. Impedaversers in the TMS-1 output. These devices will provide isolation enough to remove load variation effects.



## INSTALLATION

Your TMS-1 is supplied with non-marring feet which allow the unit to be placed where convenient for operation.

If custom mounting is desired, brackets and mounting screws to attach them to the case are available from your dealer or from Russound for \$2.50 per set. These brackets can be mounted on each end using the screws included with them. These screws are driven through the long slots in the brackets, permitting a wide range of adjustment. The brackets can be mounted in any of four directions, allowing the unit to be mounted at the top, front, bottom, or rear.

Due to the wide variety of hardware requirements, none is included to secure the TMS-1 to the mounting surface. The bracket slots are designed to clear #6 wood, sheet metal, or machine screws.

## WARRANTY

The Russound/FMP Inc. TMS-1 Tape Recorder Switch Box is fully guaranteed for 6 months from date of purchase against all defects in materials and workmanship. During this period Russound/FMP Inc. will replace any defective part and correct any defect in workmanship without charge for either parts or for labor.

For this warranty to apply, the unit must be installed and used according to its written instructions. If servicing is necessary, it must be performed by Russound/FMP Inc. The unit must be returned to Russound/FMP Inc. at the owner's expense and with prior written permission.

Accidental damage and shipping damage are not considered defects under the terms of this warranty. Russound/FMP Inc. assumes no responsibility for defects resulting from abuse or from servicing performed by any agency or person not specifically authorized in writing by Russound/FMP Inc.

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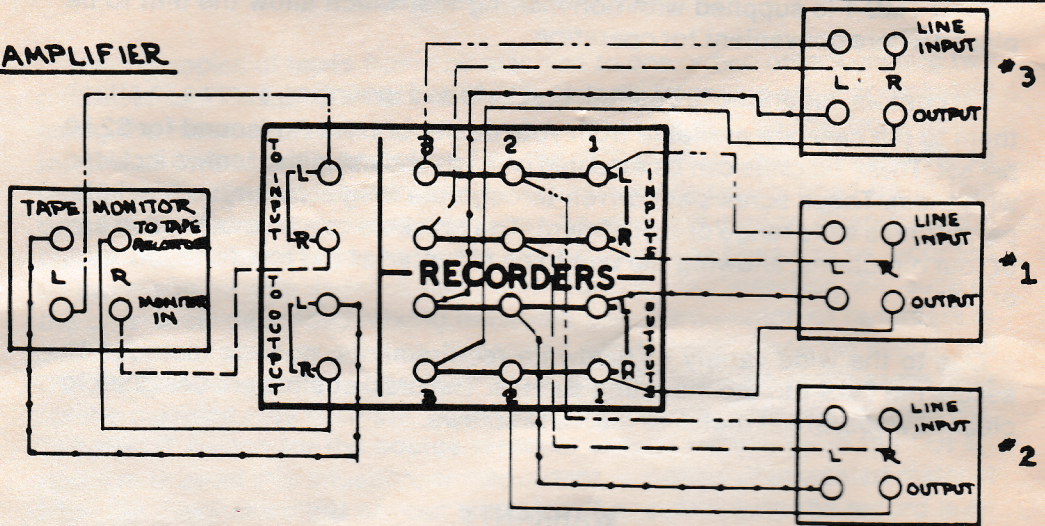
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# TYPICAL HOOKUP

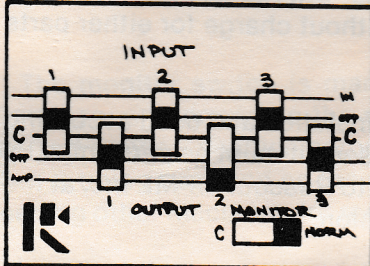
## AMPLIFIER

## TAPE RECORDER

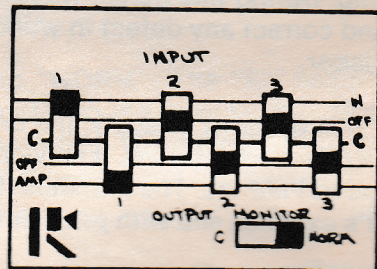


## EXAMPLES OF FREQUENTLY USED COMBINATIONS

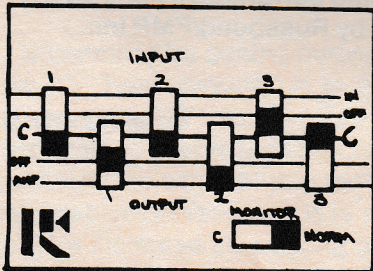
A- PLAY MACHINE #2 ONLY



B-RECORD ON #1 RECORDER AND MONITOR OUTPUT



C- COPY (DUB) OUTPUT FROM #3 RECORDER ON #1 & 2, MONITOR #2



D-MIX #1 & #2 TO RECORD ON #3 MONITOR SOURCE MACHINES #1 & 2

